

ABSTRACT OF THE DISCLOSURE

A space-time block decoder for a wireless communications system includes a demodulator that generates a demodulated symbol sequence by derotating a signal constellation of a received symbol sequence. A dimension demultiplexer that communicates with the demodulator generates in-phase and quadrature components of the demodulated symbol sequence. A one-dimensional dynamic slicer that communicates with the dimension demultiplexer generates constellation points in the signal constellation based on the in-phase and quadrature components. A bit mapping module that communicates with the one-dimensional dynamic slicer maps the constellation points to user data bits.